HP **LTO** Ultrium 4 Tape Drive – Half-height

High capacity, performance and security for direct attach backup

HP's fourth-generation of LTO tape drive technology is capable of storing up to 800GB per cartridge at up to 288GB per hour. Designed with optimum speed to better serve customers in direct attached storage (DAS) environments, where space is limited and where hard disk and system bottlenecks can impede data transfer rates. To protect the most sensitive data, AES 256-bit hardware data encryption provides easy-to-enable security to prevent unauthorized access of tape cartridges.

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Key features and benefits

- **High Value:** High capacity combined with low media and drive cost delivers an exceptionally low cost of ownership.
- **Compact:** Half-height form factor saves space and fits in a wide variety of servers, workstations and autoloaders.
- **Dependable:** Incorporates high reliability in a robust drive with high standards of data integrity.
- **Backup more data in less time:** HP's fastest half-height LTO Ultrium drive with 288GB per hour transfer rate and 800GB per cartridge capacity. Performance optimized and aided by HP's unique dynamic Data Rate Matching feature.
- **Well connected:** Compatible with leading operating systems, backup software and servers.
- **Investment protection:** Backward read and write compatible with LTO Ultrium 3 media, and read only with LTO Ultrium 2 media. Delivers compelling migration path that will double in capacity every generation.

Specifications

Capacity	800GB native, typically 1.6TB with hardware data compression
Recording format	
Logical recording format:	LTO Ultrium 4, LTO Ultrium 3 and LTO Ultrium 2 (read)
Recording technology:	16 channel PRML linear serpentine recording on half-inch tape media
Performance	
Data compression:	LTO-DC dual mode compression (enhanced version of ALDC)
Memory buffer:	128MB
Data rate matching	Dynamically variable adaptive tape speed to match host data rate from 26-60MB/sec (native)
Interface:	3Gbps Serial Attach SCSI (SAS) Ultra320 SCSI (LVD)
Sustained transfer rate:	Up to 80MB/sec native (288GB/hr) Up to 160MB/sec compressed (576GB/hr)
Burst transfer rate:	300 MB/s
Data access speed:	70 seconds typical from beginning of media
Tape speed:	5.0 metres per second (rewind speed)
Media	LTO Ultrium 4 1.6TB (compressed) data cartridge
Reliability	
MTFB:	250,000 hours at 100% duty cycle
Corrected error rate:	1 in 1 x 10 17 bits read
Loading mechanism:	Powered load with precision eject
Head life:	60,000 hours
Power requirements	
Idle:	13 Watts
Typical:	20 Watts
Maximum:	33 Watts
Power supply/required (int):	5V DC, 2.5A; 12V, 0.7A
Temperature	
Temperature range:	Operating: 50° F to 95° F (10° C to 40° C) at a minimum of 6CFM airflow Storage: -40° F to 151° F (-40° C to 66° C)
Non-condensing humidity range:	Operating: 20 to 80% RH (non-condensing) Storage: 10 to 95% RH (non-condensing)
Standards Compliance	CSA Certification to C22.2, No.60950 (cCSAus), TÜV EN60950 (IEC 60950), CE Declaration of Conformity, FCC 47 CFR Parts 15, NOM, VCCI, C-TICK, RRL, BSMI, GOSH CB Certificate and Report (IEC 60950)
Physical characteristics	
Form factor:	5.25-inch wide, half-height
Dimensions (h x w x d):	1.6 x 5.7 x 8.1 inches (4.1 x 14.5 x 20.6 cm)
Weight:	3.2 lbs (1.45 KG)
Ordering information	
EB665A	HP LTO Ultrium 4 half-height SAS tape drive (generic internal)
EB666A	HP LTO Ultrium 4 half-height SAS tape drive (generic external)
EB655A	HP LTO Ultrium 4 half-height SCSI tape drive (generic internal)
EB656A	HP LTO Ultrium 4 half-height SCSI tape drive (generic external)
EB668A	HP LTO Ultrium 4 half-height SCSI tape drive (automation)
C7974A	HP LTO Ultrium 1.6TB (compressed) RW data cartridge
C7974W	HP LTO Ultrium 1.6TB (compressed) WORM data cartridge

ULTRIUM LTO 4

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